

ABSTRACT

The present invention is related to provide a method for screening a substance interfering in the association of DOCK2 and ELMO1, a method for screening a substance interfering in the association of ELMO1 and Tiam1, and a method for searching a therapeutic agent for immune related diseases such as allergy, autoimmune diseases, GvH, graft rejection with the use of these searching methods, and so on. It was found that in DOCK2-mutant lacking 504 amino acid residues at the N terminus of DOCK2, Rac-activating ability was significantly decreased, and that actin polymerization could not be induced, and ELMO1 was identified as a molecule binding to this domain. It was found that DOCK2 was associated to ELMO1 via SH3 domain. Moreover, it was found that ELMO1 is bound with Tiam1 functioning as Rac-specific GDP/GTP exchange factor (GEF). It was found that DOCK2 activates Rac by recruiting Tiam1 via ELMO1.